M. O. M. MAR. 1984

NEWSLETTER

MICRO OF MONMOUTH

VOL.3 ISSUE 3

APR. MEETINGS

MONDAY APR. 2

8:00 PM
MANALAPAN H.S. RM. C104-108

UTILITY DEMO

GAME DEMO

BUSINESS DEMO

MONDAY APR. 16

8:00 PM
MANALAPAN H.S. RM. C104-108

UTILITY DEMO

GAME DEMO

BUSINESS DEMO

WHO'S WHO.

PRESIDENT-Frank Fezza, 201-446-4027

VICE PRES-Irwin Kaplan, 201-566-3335

SECRETARY-Marv Midlarsky, 201-780-2721

TREASURER-John Callaghan, 201-244-4404

PROG.CHAIR-Joe Petrillo, 201-338-8014

LIBRARIAN-James Krutzler, 201-738-7813

.IBRARIAN-Joel Moskow, 201-446-9664

EDITOR-Barry Joseph, 201-536-1932

TABLE OF CONTENTS

PAGE 3

BUSINESS,BUSINESS

PAGE 4

HAVE YOU
HUGGED YOUR
DISK DRIVE
TODAY ???

PAGE 6

CARTOONS

PAGE 7

FAST CASSETE
LOAD

410 RECORDER
TROUBLESHOOTING

EDITORS PLEA

SEND ARTICLES
TO:

Barry Joseph
10 Sherwood Road
Manalapan New Jersey 07726

M.O.M.
Micro of Monmouth
The Newsletter of the Computer Club of Monmouth,Inc.

Barry Joseph
10 Sherwood Road
Englishtown, N.J. 07726

The Computer Club of Monmouth is a non-profit organization of ATARI Computer Enthusiasts who share a common interest in exchanging information on the programming and operation of the ATARI microcomputer system. The club meets at the Manalapan High School at 8 o'clock on the 1st and 3rd Mondays of each month. The meeting dates are changed or cancelled when a holiday or foul weather causes the school to be closed.

Neither the M.O.M. newsletter or The Computer Club of Monmouth,Inc. is affiliated with ATARI,Inc., Warner Communications or any of their subsidiary companies. All use of the word "ATARI", their model numbers or the Fuji logo, on or between the pages of the M.O.M. newsletter are to be referenced as trademarks of ATARI,Inc.

The M.O.M. newsletter solicits from its members reviews, news, articles, orginial programs, classified ads, and any other material of interest for publication. Any material submitted for publication should be given to the editor at the meetings or have it mailed in.

The material in the M.O.M. newsletter may be freely copied. We request that credit be given to its authors and to M.O.M. This newsletter is sent to paid members of The Computer Club of Monmouth,Inc. and to other users groups on an exchange basis.

Classified ads are free to the members of The Computer Club of Monmouth, Inc.

ATARI COMPUTER ENTHUSIASTS

BUSINESS, BUSINESS, BUSINESS

<< MEETING MINUTES >>

BY

Marvin Midlarsky

*** 2/6/84 ***

There are now 30 disks available from our club library. Among the new disks available is a translator for the ATARI 800XL.

Gregg Pfremmer gave an interesting presentation on PLAYER MISSILE GRAPHICS.

Irwin Kaplan gave a demonstration of PROGRAM INVENTORY from the Eugene ATARI computer group. Irwin also demoed a graphical display program named B_GRAPH.

Marvin Midlarsky demonstrated the unique chess game CHESS 7 from ODESTA.

*** 2/27/84 ***

The tape library now consists of 11 tapes with 2 programs per tape. Many of these programs are of high quality.

Due to lagging membership renewals two new rules have been instituted. One is that in order to obtain disks or tapes from the libraries a member will be required to show a valid membership card. The other is that NEWSLETTERS will only be available to current members.

The WINNER of the M.O.M. LOGO CONTEST is Al Pavlick. Al's logo can be seen on the cover of our newsletter.

Al Pavlick demonstrated an interesting game called SEA FOX.

Irwin Kaplan showed us a 3-D plotting system recently published in ANALOG called SOLID STATES.

==========

EDITORS MESSAGE

As I told you in the FEBRUARY NEWSLETTER this issue will be devoted solely to the care and maintenance of the ATARI 410 RECORDER and the ATARI 810 DISK DRIVE. I have tried the Disk Drive TUNE-UP and the FAST CASSETTE LOAD and they work just as stated.

If anyone comes across other articles about any ATARI or ATARI COMPATABLE hardware please send them to me for use in future issues.

HAVE YOU HUGGED YOUR DISK DRIVE TODAY?
OR . . .
The Care & Feeding of the 810

By JOE BOLT
(Reprinted from the West Valley Atari Users Group Newsletter)

Is your 810 disk drive beginning to get a little temperamental?? — having difficulty or outright refusing to read some disks?? — getting noisy, giving your ERROR-136 or 144 more frequently?? . . . . then be nice to it and give it a minor tune up!! It's easy, it's fun, and it will reduce or eliminate many of the above problems.

Getting Started

First, disconnect the drive and place it on a clean work bench or table, away from any magnets. (Motors, can-openers, radio speakers). Next, in a friendly, reassuring voice, tell it "this is not going to hurt a bit, and you will feel much better when it's all over." Placing it on newspaper or a cloth may make it feel more secure. If it doesn't run away, proceed as follows. . .

1. Using an Exacto knife, carefully remove the four small plastic disks from the shallow recesses on top of the drive. Stick the disks to the top, next to the holes they have been hiding in.

2. With a non-magnetized phillips screwdriver, loosen the four screws in the holes, and carefully remove the top.

Next, in the same friendly manner, speaking directly to its innerds, tell it how sorry you are for all the times you shouted at it, hit it on its top and sides, and bounced it on the table. Tell it you will try not to ever do it again (IF it behaves itself!!).

Head and Pressure Arm Assembly

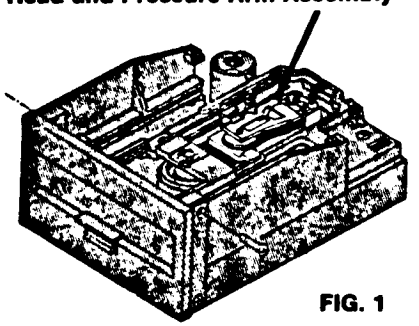


FIG. 1

Servicing the Head Assembly

With the door closed (down), locate the head and pressure arm assembly (see fig. 1) and carefully move the assembly forward and backward to familiarize yourself with the head assembly movement on the guide rails. (You are not hurting anything by doing this). Note how the stainless steel guide rails go through holes in the plastic head and pressure arm assembly.

Saturate a Q-Tip with denatured alcohol and clean the guide rails, moving the head assembly forward or backward, out of the way. Denatured alcohol only should be used since other forms of alcohol leave a residue. (Sorry, vodka or tequila won't do it!!). With a Q-Tip or bent paper clip, apply a very thin coating of Silicon Lubricant to the guide rails, moving the head assembly out of the way so that the entire rail can be lubricated. Try to get some on the bottom rails as well.

Silicon lubricant must be used because it won't drip or run when the drive heats up during use. Silicon lubricant may be obtained in several different forms: as a gel, in tubes (at hardware or auto parts stores . . . . but MUST BE SILICON LUBRICANT), or in liquid form, usually in spray cans. (Radio Shack, etc.) If you intend to use the spray lubricant, DO NOT SPRAY INSIDE YOUR DISK DRIVE!! You will make it very unhappy . . . and a happy drive is a working drive!!! If you are using a spray can, shake the can thoroughly, go outside away from the drive, saturate several Q-Tips or spray some in a pill bottle, then go back and apply lubricant carefully to the guide rails. After applying the lubricant, gently move the head assembly forward and backward a number of times over the full length of the rails to evenly distribute the lubricant.

Next, position the head assembly all the way back against the back stop. Open the disk door to raise the pressure arm

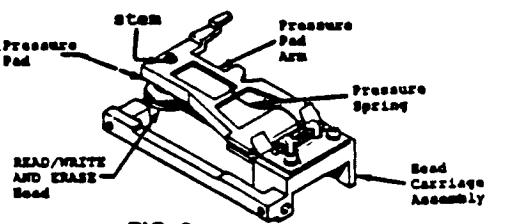


FIG. 2

Saturate a Q-Tip with the alcohol and thoroughly clean the Read/Write Head, being very careful not to raise the pressure pad arm past it's stop! (This could deform the spring, resulting in insufficient pad pressure). Insufficient pad pressure is one of the causes of Read/Write and formatting problems, and is usually caused by allowing the disk door to snap open instead of releasing the catch and raising the door gently.

Now let's take a look at the tiny pressure pad assembly. You won't see much because the pressure pad is actually a small felt or composition pad which is cemented to a small, plastic holder with a stem. All you see is the top of the stem where it protrudes through the pressure pad arm. The top of the stem is slotted with what looks like a screwdriver slot, but it does permit you to turn the pressure pad below.

For some reason, only known to Atari and M.P.I., the pressure pad orientation seems to be somewhat critical, particularly to the formatiting operation. We have had drives which absolutely would not format under any circumstances, and by merely turning the pad, solved the problem!! *continued*

To clean the pressure pad, use a Q-Tip dampened with alcohol and by reaching under the pressure pad arm, just above the Read/Write head. Lightly brush the pressure pad several times to remove any disk residue or contamination from the face of the pad. Using a jewelers screwdrive or sharpened orange stick inserted into the stem slot, turn the stem back and forth several times to assure that it is free in the hole. Be careful not to use too much pressure. If it appears to be stuck, leave it alone!! Wait a few moments to evaporate any alcohol the pad may have absorbed, then close the disk door. This lowers the pad to press against the Read/Write head. Place a finger just behind the slotted stem and lightly press down to straighten the pad assembly if it is crooked, and to assure that the pad is parallel with the face of the head.

This completes the major part of the minor tune-up. The final step is not for the faint-of-heart. It's really quite easy, can't hurt anything (if you are gentle) but it does get a little scary under certain circumstances. So, have a cup of coffee or whatever, to settle your nerves, get a good grip on yourself, and let's continue with the final step . . .

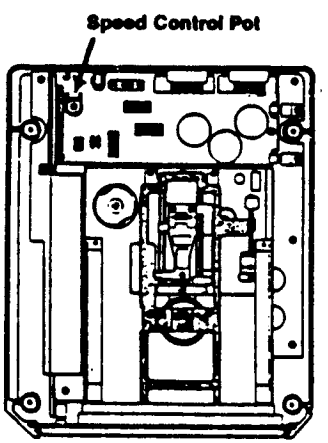


FIG. 3

Speed Control Servicing And Adjustment

Referring to Fig. 3, locate the speed control gadget (affectionately known as a potentiometer or pot). The round plastic disk on the top of the gadget is actually the knob which turns to set and control the motor speed. DO NOT MOVE THIS KNOB AT THIS TIME. Now comes the fun part . . . take your drive back to "Mother 800", connect it up and turn it on. Load a copy of DOS-2.PS into the computer.

Take a new, unformatted diskette, insert it into the drive and start the formatting sequence while watching the head assembly movement. Surprise!! If you lubricated the rails properly, you should barely be able to hear the drive formatting. With the top back on, after a few hours of operation, you won't be able to hear the head movement at all, unless you put your ear against the drive while it's formatting. This has fooled a number of fathers who thought the drives had stopped formatting. Next, write DOS on the newly formatted disk and then write MEMORY SAVE on the disk. Now turn off the coomputer and remove the BASIC Cartridge.

Now comes the tricky part . . . with a stop watch, the Chrono function on your digital watch, or the second hand on a clock, time exactly how long it takes from the time you turn on the computer until DOS begins to appear on the screen. This time should be 42.5 seconds, if your motor speed was set correctly at 290 RPM (spindle speed) as recommended by the factory. (Unfortunately, I have yet to find one that was even near the correct speed, but I used some sophisticated electronic equipment to check the speed).

NOTE: IF you have had the Fast Format Modification installed in your drive, the correct loading time should be 34 seconds.

If, after doing this loading time test several times, you find that the loading time is between 42 and 43 seconds (34 seconds for the fast-format), it is best to leave it alone and go on the the end of this epic covering re-assembly. 42.5 seconds loading time equates to approximately 290 RPM spindle speed. Each second, more or less, represents approximately 5 RPM difference from optimum speed. If the loading time took longer than 42.5 seconds, your motor speed is slower than optimum, and vice-versa. If your loading time is not within the acceptable limits, 42 to 43 seconds, you may want to reset your motor speed as described below . . . if you've got the guts!!!

Re-adjusting Motor Speed

Remove diskette, turn off and disconnect drive. With a nylon tip pen, put a dot on the edge of the speed control disk/knob and draw a short line directly below this dot on the circuit board. Make sure that the dot lines up directly with the line on the board. This will enable you to return the knob to exactly the same position it was when we started (the speed at which all your neat programs were recorded).

Now comes another scary part . . . with a small screwdriver inserted in the slot in the center of the speed control knob, rotate the knob, first in one direction until you feel it reach a stop, then in the opposite direction until it reaches the stop. The knob is capable of rotating approximately 300 degrees between stops. Being very gently (don't bang it or force it against the stops) rotate the knob from stop to stop about 10 times. What you are accomplishing here is cleaning the wiper contact (below the knob) where it rubs on the resistive element inside the gadget. The wiper contact and the resistive strip will oxidize or accumulate over a period of time or in an unfavorable environment. Unfortunately, some of the older drives have this knob

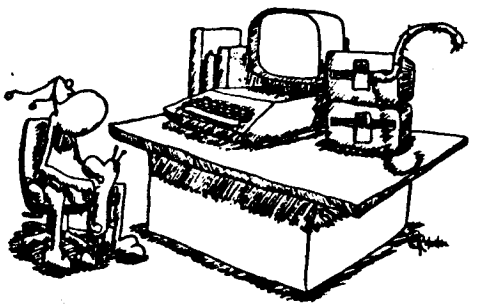
continued

sealed with a form of brown gunk (called Gliptol) on one side in order to prevent it from rotating under vibration. Have faith, this seal will break with turning pressure, unless they really loaded it on. Don't apply excessive down pressure or too much turning pressure. If yours is a particularly difficult one, find someone with small fingers to reach in, grasp the knob between the thumb and forefinger, and turn. This will usually break the Gliptol seal. Fortunately, only a few of the earlier drives had this control sealed. If with a reasonable amount of effort or turning pressure (don't push down) you still can't break the seal . . . FORGET IT!!

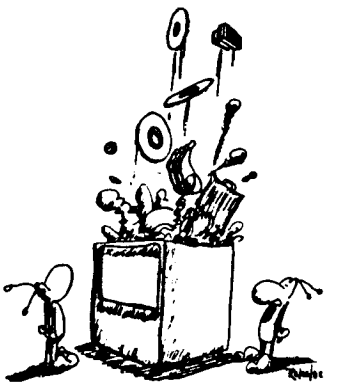
Having cleaned the wiper contact as described above, return the knob to its original setting by carefully aligning the dot with the line on the board. Reconnect the drive to the computer and turn it on. Using our test disk, re-run the loading time test as before. If the loading time is not within the 42-43 second optimum time frame, readjust the motor speed as necessary. This is accomplished by rotating the speed control knob in very small increments and re-running the test. If your motor speed is too slow (i.e., taking longer than 43 seconds to load the test program) rotate the speed control knob counter-clockwise. If the motor speed is too fast, rotate the knob in the clockwise direction, but only in very small increments. Each adjustment should be no more than the thickness of a nickel. When you have readjusted your drive motor to the correct speed, this completes the minor tuneup. If you still have problems after this tuneup, your drive may require more professional help offered at a Disk Drive Hospital where we have all the equipment to perform major surgery such as critical head alignment, pressure arm adjustment, diagnostic tests and intensive care.

To finish the job, carefully re-install the top section, but don't tighten the screws too tight. Don't forget to put the little plastic disks back over the holes. The serve no useful function at all, but your drive likes them because they make it look nice. Finally, tell your drive, "see, that didn't hurt at all," and while fondling and caressing it around the connector area (it loves that), tell it you are sorry you've neglected it, that you love it and that you are sure it will do its very best for you.

After you have performed this tuneup once or twice, the entire procedure takes less than 10 minutes, and with the exception of lubricating the guide rails, which should only be done when your drive gets noisy during formatting, the remainder of the tuneup should be performed every couple of months to keep your drive happy, healthy, content and performing well.



"Have you seen my cat, daddy?"



"The best feature of this drive is the removable pak."

Fast Cassette Load

By Dave Thompson
West Valley Atari Users Group

There is hope for our users who don't have a disk drive yet and are tired of going to lunch while the the Mailing List program or some adventure type game loads. Not long ago I was in the same boat, and I said to myself there must be a better way...and there is.

I'm sure that any Atari user worth his RAM has read many articles including ones on turning off the DMA, and said, "a lot of good this will do me." Well, it can do you some good if you want to cut your loading time down considerably. All you have to do is load your program and then insert a new cassette (just as a precaution). Then in direct mode type POKE 559,0:CSAVE:POKE 559,34 and then press RETURN. Your screen will go blank. The POKE 559,0 turns off the DMA and the POKE 559,34 turns the DMA back on again. You will hear the usual BEEP BEEP, and you will press RECORD and PLAY on your recorder and then press return. Then get ready because after the initial time for the cassette to space the leader forward your cassette will really start moving data. Instead of the T.V. making the usual BEEP pause pause pause BEEP, you will hear BEEP BEEP and so forth till your program is completely saved. Then your screen will come back on. There is one small drawback. You cannot see the display on the screen, a small price when you have your tape saved at an increased speed. When you load your program you just type in the normal CLOAD, and your tape will load just as fast as it was saved.

There are a couple of other uses that turning off the DMA can help you with,such as search and sort routines of the Mailing List program. I have made additions to the code in one version of the Mailing List and it really makes a difference. You may want to try this on some of your own routines. EXPERIMENT. If you have a backup of your program you can't go wrong. Just don't forget to turn on the DMA when you're finished.

<< RECORDER TROUBLESHOOTING >>

SUBMITTED BY

Michael Carovillano

SUBJECT

138, 140, and 143 errors when using the 410.

DESCRIPTION

It is a common occurrence for a customer to experience problems while trying to load cassette tapes with the 410 program recorder.

TROUBLESHOOTING

1. PERIODIC MAINTENANCE

   Problem: Failure to perform periodic maintenance. Dirty pinch roller or capstan can cause uneven tape speed and damage media. Buildup of oxide residue on the read/write head can interfere with proper operation.

   Solution: Perform periodic maintenance as outlined in the 410 Operator's Manual.

2. PERIPHERAL CONNECTION

   Problem: The 410 is connected through a peripheral (810, 850, 820, 822) that will not properly pass on the signal to the console.

   Solution: Connect the 410 directly to the console and repair the defective peripheral.

3. OS REVISION B INCOMPATIBILITY

   Problem: The software logic is not compatible with revision B of the OS. All ATARI software is fully compatible with revision A or B but some third part titles are not compatible.

   Solution: The third part vendors usually are able to replace the software with an updated version. It is possible to determine what version of the OS is installed by checking memory location 58383. From BASIC: PRINT PEEK (58383) [RETURN]. A value of 56 indicates revision A whereas 0 indicates revision B.

4. PAL OPERATING SYSTEM

   Problem: An international PAL version of the OS is installed instead of the domestic NTSC version.

   Solution: Install a domestic 10K ROM. It is possible to determine what version of the OS is installed by checking memory location 58383. From BASIC: PRINT PEEK (58383) [RETURN]. A value of 56 or 0 indicates NTSC whereas 249 indicates PAL.

5. 410 MOTOR CONTROL

   Problem: The console does not properly control the 410 motor. After a cold start in BASIC, merely pushing PLAY on the 410 should not cause the tape to begin moving. POKE 54018,52 should start the motor and POKE 54018,60 should stop the motor.

   Solution: Check to see if transistor Q107 on the 800 or Q102 on the 400 motor control line is improperly shorted to ground.

6. 410

   Problem: Faulty I/O cable, drive mechanism, or electronics will necessitate repair or replacement of the 410.

   Solution: Follow the procedures in the Field Service Manual.

7. NEWER 410

Problem: Many ATARI cassette-based products have loading problems on the newer model of the 410 (with PAUSE and no carrying handle) but not on the older 410. The newer 410 has a more powerful amplifier which raises previously insignificant background noise to significant levels and causes error conditions when interpreted as data. All ATARI cassette-based products have been re-mastered and the finished goods stock was replaced as of March 1, 1982.

Solution: Replace the media with inventory acquired after March 1, 1982.

8. SYSTEM RESET

Problem: Pressing SYSTEM RESET does not reset the data I/O line in POKEY. Subsequent use of CSAVE is unreliable because the data I/O line is not clear, POKEY sends garbage, and the data stored is unrecoverable.

Solution: Avoid using SYSTEM RESET. Before using CSAVE or CLOAD, always execute an LPRINT command.

Note: Executing a serial bus command properly reset POKEY ad clears the data I/O line. The simplest serial bus command to execute is LPRINT. If a printer is not attached when the LPRINT is executed, and error 138 occurs. This occurrence is normal and does not interfere with the reset of POKEY.

9. PRE-RECORDED TAPE POSITIONING

Problem: Tape is improperly positioned.

Solution: Pre-recorded tapes should load properly if rewound completely. If not, manually wind the leader onto the take-up reel before attempting the load.

10. USER-RECORDED TAPE POSITIONING

Problem: Tape is improperly positioned relying on the counter.

Solution: Store only one program per side of tape positioned manually at the end of the tape leader.

11. FAULTY PRE-RECORDED MEDIA

Problem: Tapes produced in mass quantity are not individually verified to load successfully because of sampling techniques.

Solution: Replace the tape.

12. FAULTY USER-RECORDED MEDIA

Problem: The oxide coating on audio cassette tape is subject to momentary dropouts that will not record data.

Solution: Replace the tape.

13. WORN MEDIA

Problem: Tapes do stretch and warp after prolonged normal usage.

Solution: Replace the tape. Avoid leaving the PLAY, ADVANCE, and REWIND buttons engaged after tape movement is completed.

14. MAGNETIC FIELD

Problem: Data is altered during transmission because of the 410 I/O cable's close proximity to a magnetic field.

Solution: Do not set the 410 on or close to a TV or power transformer.

15. VIBRATION

Problem: Data is altered during transmission because the 410 was bumped, moved, or jarred.

Solution: Keep the 410 stationary during data transmission.

16. CRO^2TAPE

Problem: The bias of CRO^2tape is incompatible with the 410.

Solution: Use normal ferrite audio tape.

THANKS TO M.O.M.

Thanks to the technical memo in the January issue of M.O.M., I now can operate LETTER PERFECT with my percom disk drive. Percom's LETTER PERFECT FORMAT UTILITY worked just fine. This one article alone has made my membership in M.O.M. worthwhile. I look foward to many more articles such as this. Thanks again.

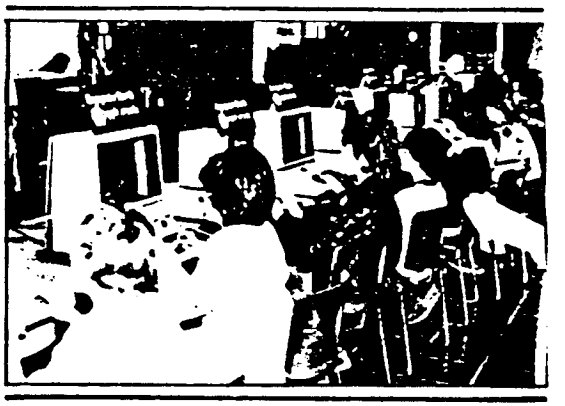
Joel H. Moskow

P.S. Can anyone help me with my printer? It is a panasonic KX-P1090, and I cannot get LETTER PERFECT to make it underline. It has underline ability.

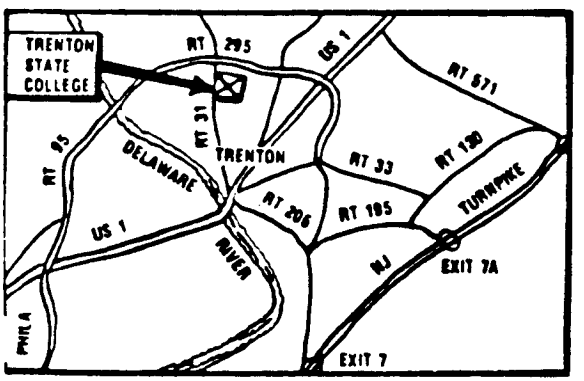
ANNUAL TRENTON COMPUTER FESTIVAL

TRENTON STATE COLLEGE • TRENTON NJ
SATURDAY • APRIL 14, 1984 • 10 AM - 6 PM
SUNDAY • APRIL 15, 1984 • 10 AM - 4 PM

TSC
TRENTON
STATE COLLEGE



• Bigger and better than last year! •
Attendance exceeded 10,000 last year • huge outdoor flea market • enlarged indoor commercial exhibitor area • 9 simultaneous technical sessions • user group sessions • free courses, demonstrations, new computer graphics theater • Saturday night banquet • computer conference sessions and forums on software, hardware, home applications education, music, robotics, amateur radio, the arts and more (Saturday) • user group sessions on Apple, Radio Shack, CPM/SIGM, IBM, PET, etc. • special tutoring sessions for the general public and novices (Sunday) • and much, much more! • convenient to New York City and Philadelphia



EASY TO GET TO FREE PARKING FOR OVER 6000 CARS

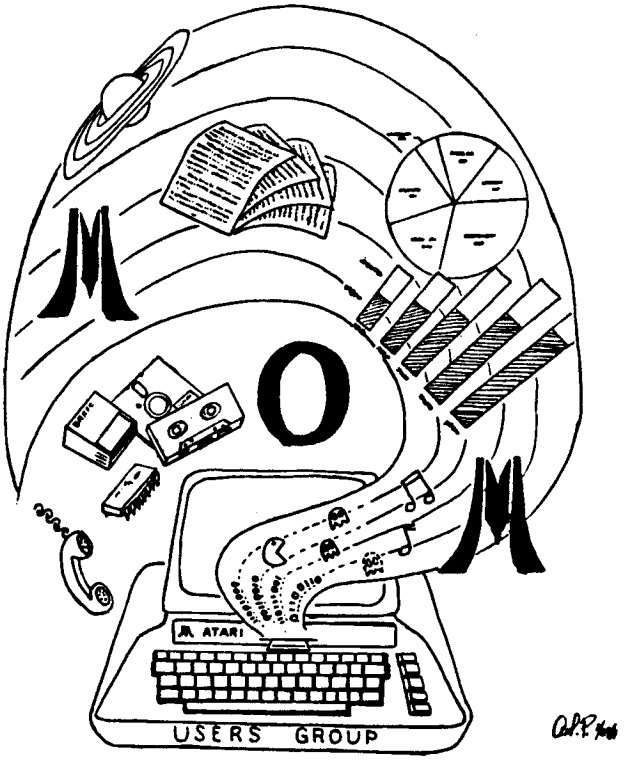
Admission/Registration
$5.00 Covers both days and all events (except banquet)
$3.00 For students/senior citizens
$15.00 For Flea Market spots for the entire weekend (includes one admission ticket)

Banquet
$10.00 Saturday Night

Sponsored by:
Amateur Computer Group of NJ, Philadelphia Area Computer Society, Trenton State College Computer Society, Central New Jersey Computer Club, Institute of Electrical and Electronic Engineers/ACM Princeton Section and the Department of Engineering Technology, Trenton State College.

THE ORIGINAL PERSONAL COMPUTER SHOW

• For more information contact: SIEET • Trenton State College • Hillwood Lakes CN550 • Trenton, NJ 08625 • (609) 771-2487



Barry Joseph
10 Sherwood Road
Manalapan New Jersey 07726

DEISS RICHARD 12/84
32 TARRYTOWN ROAD
MANALAPAN,N.J. 07726

FIRST CLASS